Kinematic Reach/Containment

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The official link for this solicitation is:
http://www.acq.osd.mil/osbp/sbir/solicitations/sbir20152/index.shtml

Agency:
Department of Defense

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DoD 2015.2 SBIR Solicitation

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Topic Number:
MDA15-002

Description:
Seek innovative improvements and creative applications of mature product and material technologies that can address increased kinematic performance and containment. Reducing mass while maintaining or increasing performance (more divert delta V or more efficient use of packaged delta V) will increase the kinematic reach and containment of the vehicle. These innovations can range from light weight rocket motor components minimizing missile stage inert mass, innovative high temperature non-eroding materials that can survive higher temperature environments (> 5000 F for approximately 120 s for kinematic reach and > 3500 degrees F for approximately 300 s for containment) to innovative propulsion components which enable greater performance. This may involve innovative research and development, advanced material characterization testing, development of improved material manufacturing and component manufacturing processes, etc., that lead to a specific products for improved missile kinematic performance. PHASE I: Develop a proof-of-concept solution; identify candidate materials and manufacturing processes. Complete a preliminary evaluation of the process, technique or manufacturing technology showing the assessment of improvement through improved performance and/or reduced inert mass. At completion of this program the design and assessment will be documented for Phase II. PHASE II: Expand on Phase I results by producing components, demonstrating manufacturing processes and inspection process. These activities will provide data to support the studies completed in the Phase I program to substantiate the performance improvements. This will allow a more thorough assessment of the technology for missile defense applications. PHASE III: The developed process/product should have direct insertion potential. Conduct engineering and manufacturing development, test,

evaluation, qualification. Demonstration would include, but not limited to, demonstration in a real system or operation in a system level test-bed with insertion planning for a missile defense application. Commercialization: The technologies developed under this SBIR topic should have applicability to the defense industry as well as other potential applications such as commercial space flight and commercial industries which employ the use of energetic chemicals.